ES-100/spkr

ES-100/spkr, a variant of the network audio standard EtherSound™, enables manufacturers to implement EtherSound™ ES-100 in new devices at a lower cost.
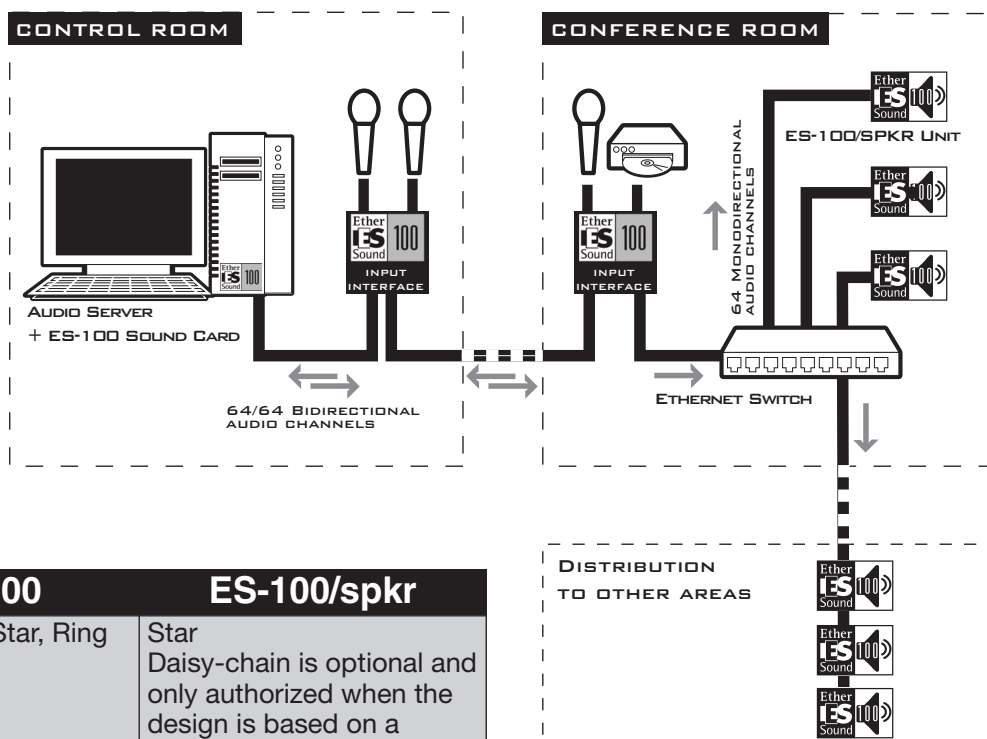
ES-100/spkr products fit nicely into ES-100 network terminal points, where only unidirectional streams and audio-out devices are required. These devices (e.g. in-wall/ceiling speakers) are typically found in Public Address or monitoring-only systems.

Technical specification summary:

- To be used in conjunction with any ES-100 network
- Implementation achievable on microcontrollers, DSP or FPGA
- Bandwidth requirements: 100 Mbps dedicated Ethernet network.
- Audio format: 24 bit PCM
- Sampling frequency: 44.1 or 48 kHz (88.2, 96 kHz possible).
- Channel count per 100 Mbps cable: 64 channels
- Audio interface: up to 4 outputs
- Network architectures: star, daisy-chain*
- Control: fully compatible with the standard EtherSound ES-100 control features

(*) Available only in the case of an ES-100/spkr implementation based on a FPGA core provided by Digigram.

Typical application

Features comparison

Feature	ES-100	ES-100/spkr
Network topology	Daisy-chain, Star, Ring	Star Daisy-chain is optional and only authorized when the design is based on a FPGA implementation of ES-100/spkr provided by Digigram ES-100/spk devices must be located downstream from ES-100 devices
Audio transport	Bidirectionnal in daisy-chain topology, unidirectional in star configurations 64 audio channels (24 bit samples)	Unidirectionnal 64 audio channels (24 bit samples)
Audio channels	Devices can extract audio from the network (up to 64 output channels) Devices can inject audio in the network (up to 64 input channels)	Devices can extract up to 4 audio channels at 48kHz (2 at 96 kHz)